

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for enabling provision of service-levels in an Ethernet-over-synchronous communication network, the method comprising:

receiving Ethernet frames at an input rate;

mapping said Ethernet frames into a synchronous protocol thereby producing mapped data frames suitable for transmission in said synchronous protocol;

generating a pause signal after a received amount of said Ethernet frames reaches or exceeds a threshold capacity level, said pause signal being generated in accordance with a service-level agreement (SLA) determining an output rate based upon an aggregate rate enabled by K memory containers out of N available memory containers, where K and N are integers, wherein each memory container enables a given rate and the output rate is one of a plurality of discrete rates and is equal to the given rate multiplied by K; and

outputting the mapped data frames from the K memory containers thereby providing synchronous transmissions at said output rate.

2. (original) The method according to claim 1 and wherein said generating step comprises preventing transmission of said Ethernet frames at a capacity that reaches or exceeds a capacity allowed by the SLA.

3. (original) The method according to claim 1 and wherein said Ethernet-over-synchronous communication network comprises at least one of the following: Ethernet-over-SONET; and Ethernet-over-SDH network.

4. (original) The method according to claim 1 and wherein said input rate comprises one of the following: a rate of 1 gigabit per sec; a rate of 10 gigabit per sec; a rate of 100 megabit per sec; and a rate of 10 megabit per sec.

5. (original) The method according to claim 1 and wherein said generating step comprises dynamically generating the pause signal in accordance with an SLA provisioned or determined in real-time.

6. (original) The method according to claim 1 and wherein said generating step comprises

determining K that is required for supporting said SLA; and

selecting said K.

7. (currently amended) Apparatus for enabling provision of service-levels in an Ethernet-over-synchronous communication network, the apparatus comprising:

an Ethernet receiving buffer operative to receive Ethernet frames at an input rate;

mapping circuitry operatively associated with the Ethernet receiving buffer and operative to map the Ethernet frames into a synchronous protocol thereby producing mapped data frames suitable for transmission in said synchronous protocol;

a plurality of memory containers N operatively associated with the mapping circuitry;

a controller operatively associated with the N memory containers and the mapping circuitry and operative to generate a pause signal after said Ethernet receiving buffer is filled by an amount of said Ethernet frames that reaches or exceeds a threshold capacity level, said pause signal being generated in accordance with a service-level agreement (SLA) determining an output rate based upon an aggregate rate enabled by said K memory containers; and

a synchronous output buffer operatively associated with said controller and said N memory containers and operative to output the mapped data frames from the K memory containers under control of the controller thereby providing synchronous transmissions at said output rate, wherein each memory container enables a given rate and the output rate is one of a plurality of discrete rates and is equal to the given rate multiplied by K.

8. (original) The apparatus according to claim 7 and wherein said controller is also operative to prevent transmission of said Ethernet frames at a capacity that reaches or exceeds a capacity allowed by the SLA.

9. (original) The apparatus according to claim 7 and wherein said Ethernet-over-synchronous communication network comprises at least one of the following: Ethernet-over-SONET; and Ethernet-over-SDH network.

10. (original) The apparatus according to claim 7 and wherein said input rate comprises one of the following: a rate of 1

gigabit per sec; a rate of 10 gigabit per sec; a rate of 100 megabit per sec; and a rate of 10 megabit per sec.

11. (original) The apparatus according to claim 7 and wherein said controller is operative to dynamically select said K out of the N memory containers and to dynamically generate the pause signal in accordance with an SLA provisioned or determined in real-time.

12. (original) The apparatus according to claim 7 and wherein said threshold capacity level is lower than the entire capacity of said Ethernet receiving buffer.

13. (currently amended) An Ethernet-over-synchronous communication system comprising:

an Ethernet interface operative to provide Ethernet frames generated by a service provider at an input rate;

a synchronous mapper operatively associated with the Ethernet interface and including N memory containers, said mapper being operative to convert said Ethernet frames at the input rate into mapped data frames in a synchronous protocol at an output rate which is an aggregate rate enabled by K out of the N memory containers that are loaded with said mapped data frames, and to generate a pause signal after a received amount of said Ethernet frames reaches or exceeds a threshold capacity level, said pause signal being generated in accordance with a service-level agreement (SLA) determining said output rate, and wherein each memory container enables a given rate and the output rate is one of a plurality of discrete rates and is equal to the given rate multiplied by K;
and

Appln. No. 09/865,557

Amd. dated June 2, 2005

Reply to Office Action of January 3, 2005

a synchronous network operatively associated with the synchronous mapper and operative to receive from the mapper said mapped data frames from said K memory containers and to transmit said mapped data frames in a synchronous transmission at said output rate to a customer.

14. (original) The system according to claim 13 and wherein said output rate is determined by an SLA through a selection of K.